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PATENT
Attorney Docket No.: A524R1T28900
TTC No.: 16301-028900

Assistant Commissioner for Patents
Washington, D.C. 20231

On Feb 27 2001

TOWNSEND and TOWNSEND and CREW LLP

By: [Signature]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

KATSUYUKI MUSAKA et al.

Application No.: 09/187,551

Filed: November 5, 1998

For: METHOD FOR FORMING A THIN
FILM FOR A SEMICONDUCTOR
DEVICE

Examiner: Marianne Padgett

Art Unit: 1762

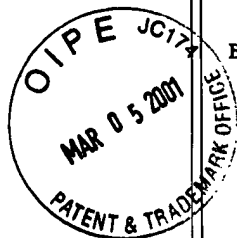
DECLARATION OF KATSUYUKI
MUSAKA UNDER 37 CFR § 1.132

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I, Katsuyuki Musaka, hereby declare as follows:

1. I am a coinventor of U.S. Application No. 09/187,551, filed November 5, 1998, entitled "Method for Forming a Thin Film for a Semiconductor Device" (hereafter "the present Patent Application").
2. I received a B.S. in Computer Science and Engineering from the University of Tsukuba in 1986.
3. I am currently employed by Applied Materials, Inc. of Santa Clara, California, the assignee of the present Patent Application, and have been a senior member of the technical staff since 1996. I have over 13 years of experience in semiconductor manufacturing including plasma CVD, and have worked at other companies including Intel and Motorola.



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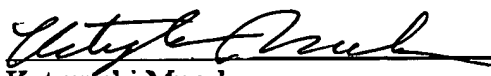
4. I was a senior member of the technical staff for Applied Materials at the time of the present Patent Application work.

5. I have personal knowledge of tests conducted during work on the subject matter of the present Patent Application.

6. Fig. 13 of the present Patent Application shows test results of C_2F_6 flow rate versus stress of the silicon oxide film obtained according to a method of the present Patent Application. Fig. 13 shows a reduction of the stress, which is a compressive stress of about -1.25×10^9 dyne/cm² at zero C_2F_6 flow, with higher C_2F_6 flow rates. The magnitude of the compressive stress decreases with an increase in the C_2F_6 flow rate. As seen in Fig. 13, the stress changes from negative (i.e., compressive) to positive (i.e., tensile) at about 450 sccm C_2F_6 flow rate. At a C_2F_6 flow rate of about 600 sccm, the stress becomes a tensile stress of about 0.4×10^9 dyne/cm².

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated: 1/26/01


Katsuyuki Musaka
10164 Danube Dr.
Cupertino, California 95014

TOWNSEND and TOWNSEND and CREW LLP
Tel: (415) 576-0200
Fax: (415) 576-0300
RL
PA 3121185 v1